3:Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

garters and belts of buffalo hair. But they did make string and willow matting. There is an account of a mat used on the seat before the fire. Henry[1] says that the mat was of small willows of equal size, fastened together by thread of native make passed through each stick about one foot apart. The mats were ten feet long, four feet broad, and the two ends for two and a half feet were raised slanting from the ground and supported by a kind of sofa. Verendrye says they made wicker work very neatly, flat, and in baskets.

The Mandans used snow-shoes which were only about two and a half feet long.[2] For their dyes and paints they made use of the following: red obtained from buffalo-berries, black from sunflowers, and yellow from a kind of moss which came from the Rocky Mountains. Blue, red, black, yellow and white clays were also used.

An indispensable article of the full dress was the fan. These were made from the large plumes of the eagle, hawk, crow, and a number of other birds, depending on the rank of the owner.

The Mandan pipes differed a trifle from those of their neighbors, being less ornate.[3] They were either of stone, black clay, or yellow clay painted black. The stone pipes were obtained mostly from the Dakotas. Pipes with wooden bowls, lined with stone, were also used. The stem was long and round or flat. Catlin describes one pipe as of red steatite (catlinite) with a stem three feet long, half its length wound with braids of porcupine quills. They also had the calumet pipe which will be considered in connection with the ceremonies.

The Mandans and their neighbors the Arikara and Hidatsa made glass beads, an art which they claimed was taught to them by the Snake Indians. They did not make the glass but used glass obtained through the whites. Lewis and Clarke[4] give a short account of the manufacture of beads which is exceedingly interesting. It may be thus summarized. The secret is known only to a few. Glass of several colors is pounded fine, each color separate; this is washed in several waters until the glass stops staining the water. They then take an

[1] Op. cit., vol. I, p. 340.
[2] Ibid., p. 391.
[3] Maximilian: p. 390.
[4] March 16, 1805.

3: Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

markings on one side. The largest is shown in Fig. 4, *a*. It is about two inches in width by two and a half in length, and a quarter of an inch in thickness. One face is smooth, and the other is marked by double diagonal lines which pass through

FIG. 4. RECTANGULAR STONE OBJECTS. ¼

an indentation in the center. Each edge has three notches. Fig. 4, *b*, shows a similar stone object, smaller, and somewhat longer in proportion. It is made of catlinite. This has also three notches on each edge, but the diagonal lines are triple, though not so definite, nor so deeply incised. Fig. 4, *c*, shows a cruder stone object of the same general character as the two above described. The material is a yellow clay-stone. The stone is rudely shaped and marked. It has no notches on the edge. On one face is a diagonal marking, and on the other a series of lines, some of which cross a line running lengthwise of the stone.

The stones may have been used as counters in some sort of game. Somewhat similar articles of bone were found, one of which is shown in Plate XXXVI, fig. *r*.

A small piece of the tubular base of a pipe of catlinite was uncovered in the refuse, near the bottom of the central cache-pit in Work 5.

Besides the worked stone and boulders, various mineral paints and colored earths were found. Lumps of fine yellow clay, which may well have been used for paint, were collected in the mounds. Small quantities of red paint were found in loose lumps and adhering to fragments of pottery. Pieces of mica-schist, deeply tinged with iron, may have been ground up into brown paint.

6: Wied-Neuwied T-5 (1832-1834) 1843 NQ17 Mandan NQ17

262 which is so favourite a dish among the northern Indians, is not much in use among the Mandans. Their only drink is water, for they are unacquainted with the method of preparing fermented [273] liquors. They did not obtain any spirits, either from the American Fur Company, or the agents of Messrs. Soublette and Campbell; hence an intoxicated person is scarcely ever seen. They are extremely fond of sugar, and likewise of salt, which they procure from their lakes, and, if the supply is insufficient, purchase from the Whites. They are likewise fond of coffee and tea, well sweetened. It has been affirmed, that several North American nations, especially those which speak the Algonquin language, are cannibals, and more particularly the Chippeways and the Potawatomis; but I found no trace of this unnatural custom among the Missouri nations.

592 Two, and sometimes three, families usually live together in an Indian hut, commonly the
595 father, with his married sons or sons-in-law. Polygamy is everywhere practised, and the number
596 of wives differs; however, they have very seldom more than four, and, in general, only one. The women are very skilful in various kinds of work, particularly in dyeing and painting the buffalo
386 robes. They extract a red colour from the roots of the savoyenne, or from buffalo berries; yel-
824 low from a lichen of the Rocky Mountains; black from belianthus, as well as from a black stone
439 or clay; blue and green they extract from European substances. Among the Mandans, Manitaries, and Arikkaras, the women, as Lewis and Clarke relate, manufacture beads from coloured glass. They powder those which they have obtained from the traders, and mould them into different shapes. This custom is, however, no longer common. The dyeing of the skins, of
323 which many travellers have spoken, employs a great portion of the women's time. These three nations understand the manufacture of earthen pots and vessels, of various forms and sizes. The clay is of a dark slate colour, and burns a yellowish-red, very similar to what is seen in the burnt tops of the Missouri hills. This clay is mixed with flint or granite, reduced to powder by the action of fire. The workwoman forms the hollow inside of the vessel by means of a round stone which she holds in her hand, while she works and smooths the outside with a piece of poplar bark. When the pot is made, it is filled and surrounded with dry shavings, and then burnt,
501 when it is ready for use. They know nothing of glazing. With respect to their boats, the North Americans are far more expert than the Brazilians, Patagonians, and other South Americans, who live on the banks of rivers, and yet have contrived no means to pass them. The Chippeways and other northern nations have handsome vessels of birch bark; the Esquimaux makes his kiack, which is curiously covered with seal skin; and on the Missouri, especially among the Mandans, there are boats of buffalo skin, which are represented in the plates accompanying this work. They are very light, of a circular form, stretched on a frame of several pieces of wood crossing each other, and may be carried on the shoulder of a single individual.

584 If a young Indian desires to marry, and has obtained the consent of the girl, he endeavours to procure that of her father; when he is certain of this, he brings two, three, nay, even eight or